

REMARKS

Applicants have carefully studied the outstanding Official Action. The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

The Application as examined included claims 41 – 50, 53, 54 and 130. Claims 2 – 30, 33 – 39, 51, 52, 55, 57, 59, 61, 62, 66 – 72, 74 – 115, 117 – 129, 131 and 133 were previously cancelled. Claims 1, 31, 32, 40, 56, 58, 60, 63 – 65, 73, 116 and 132 were previously withdrawn.

In the present response, withdrawn claims 1, 56, 58, 60, 63, 65 and 73 are cancelled without prejudice. Pending claims 41 – 43, 45, 46, 54 and 130 and withdrawn claims 31, 32, 40, 64, 116 and 132 are amended. Pending claims 44, 47 – 50 and 53 are unchanged.

Claims 41 – 50, 53 and 54 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 41 is amended to define a tarnish-resistant article as one that meets the reflectance requirements recited in the claim. Claim 41 is further amended to recite that the air must be heated. Support for this amendment can be found, *inter alia*, on page 25, lines 17 – 23.

Claim 45 is amended to spell out “EDTA”. The specification at page 10, line 1 is similarly amended. Applicants submit that EDTA is well-known in the art, and that the amendment does not constitute new matter.

It is submitted that independent claim 41, and its dependent claims 42 – 50, 53 and 54, as amended, are definite, and Examiner is requested to withdraw the rejection.

Claims 41 – 50, 53 and 54 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Inberg et al. (“Material and Electric Properties of Electroless Ag-W Thin Film”) in view of Franz (US 3,723,138).

Claim 41 is currently amended to incorporate the limitations of claims 42 and 46, and further to recite polyethylene glycol (PEG) as a component of the electroless deposition solution. Support for this amendment is found, for example, on page 26, lines 7 – 12 of the specification. Withdrawn claims 40, 64, 116 and 132 are similarly amended.

Claim 42 is amended to recite ammonium acetate as a component of the electroless deposition solution. Support for this amendment can be found, for example, on page 24, lines 11 – 14. Claim 46 is amended to recite benzotriazole (BTA) as a component of the electroless deposition solution. Support for this amendment can be found, for example, in Table 3 on page 28.

Claim 43 is amended in view of the amendments to claim 41. Withdrawn claims 31 and 32 are amended in view of the amendments to withdrawn claim 40. Claim 54 is amended to depend from claim 53 instead of cancelled claim 52.

Inberg describes a method of forming a silver-tungsten layer on an object. Franz teaches a method of forming a silver layer. It is well-known that one problem with prior art methods for electroless deposition of silver is the tendency of silver to aggregate on the surface as opposed to forming an even coating. The result is a coating with a relatively high surface area, which is more susceptible to reaction with airborne sulfur and tarnishing.

The method of the present invention, as recited in amended claim 41, includes forming an electroless deposition solution that comprises, *inter alia*, polyethylene glycol. PEG prevents aggregation of silver on the surface and provides for an even coating.

Applicants respectfully submit that none of the cited prior art, alone or in combination, shows or suggests a method for providing a tarnish-resistant silver-tungsten coated object, as recited in amended claim 41, including forming an electroless deposition solution that comprises, *inter alia*, polyethylene glycol, and that amended claim 41 is therefore patentable.

Claims 42 – 50, 53 and 54 each depend directly or ultimately from claim 41 and therefore are allowable.

Claim 130 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Akram et al. (US 6,188,232) in view of Franz (US 3,723,138).

Akram et al. describes a package for testing semiconductor dice comprising, inter alia, land pads made of metals selected from gold, copper, silver, tungsten, tantalum, platinum, palladium, molybdenum, and alloys thereof.

Claim 130 is amended to recite that the silver ternary layer is a silver-tungsten-rhenium layer. Claim 130 as amended is similar in scope to original claim 131. Withdrawn claim 132 is similarly amended.

The method of the present invention, as recited in claim 130, includes forming a silver-tungsten-rhenium layer on an surface.

Applicants respectfully submit that none of the cited prior art, alone or in combination, shows or suggests a method for providing a silver ternary metal layer on a surface, as recited in amended claim 130, including forming a silver-tungsten-rhenium layer on an surface, and that amended claim 130 is therefore patentable.

In view of the foregoing remarks, all of the claims are believed to be in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

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Respectfully submitted,

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